

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

TQ DELTA, LLC,)	
)	
Plaintiff,)	C.A. No. 13-cv-1835-RGA
)	
v.)	
)	JURY TRIAL DEMANDED
2WIRE, INC.,)	
)	
Defendant.)	
)	

**PLAINTIFF TQ DELTA, LLC’S FINAL CLAIM CHARTS FOR PRODUCTS THAT
CONTAIN BROADCOM DSL CHIPS**

Pursuant to Paragraph 4(c) of the Court’s Default Standard for Discovery and the Court’s April 11, 2018 Final Scheduling Order, Plaintiff TQ Delta, LLC (“Plaintiff”) hereby provides its Final claim charts for representative claims on products that contain Broadcom DSL chips. Pursuant to the Court’s January 6, 2017 Order, TQ Delta’s lead trial counsel has not taken discovery from third party chip manufacturer Broadcom. Instead, the Court ordered an alternative “conflicts counsel” to take such discovery from Broadcom. These charts include information currently available to TQ Delta’s lead trial counsel that was taken by the conflicts counsel from Broadcom. TQ Delta reserves all rights to supplement these charts.

Plaintiff provides these claim charts before the completion of fact or expert discovery, prior to receiving the Court’s claim constructions for patent families 5 and 6, and only shortly after receiving the Court’s claim constructions for patent family 7. These charts are being served as a supplement to its previous Initial and Supplemental Claim Charts, as well as its previous identifications of Accused Products, all of which are hereby incorporated by reference in their entirety.

The attached claim charts are based upon information reasonably and presently available to Plaintiff, without the benefit of completion of formal discovery or production of all relevant core technical documents. Accordingly, Plaintiff reserves the right to modify, amend, retract, and/or supplement these claim charts.

Plaintiff contends that Defendant, either alone or in conjunction with others, has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, the patents-in-suit in violation of 35 U.S.C. § 271. Defendant's making, using, selling, offering to sell, and/or importation of such accused products constitute direct infringement of Plaintiff's asserted patents as indicated. Plaintiff contends that each element of each asserted claim is literally met unless otherwise indicated. But to the extent that any claim element is found not to be literally met, Plaintiff contends that the Accused Products and/or the accused use thereof embodies such claim elements under the doctrine of equivalents because there are no substantial differences for each claim element, and the Accused Products perform substantially the same function, in substantially the same way, to achieve substantially the same result.

The claim charts are not intended to indicate that every cited section of the identified industry standards, or every requirement of every cited section, must be practiced by a product in order for a particular claim to be infringed. The listing is also not intended to indicate that the cited sections are the only portions of the standards that are relevant to infringement of the subject patent.

The claim charts are not intended to indicate that any claim of a subject patent is necessarily standard-essential. For example, some elements of a claim may be required to implement a cited standard section while other elements of a claim may not be required to implement the standard.

The attached charts may refer to documentary evidence, citations to and quotations of the applicable industry standards, and test data for certain Accused Products. The documentary citations are not intended to be an exhaustive listing of all such evidence showing infringement.

The absence of testing information in the charts for any particular product, patent, or claim is not an admission that testing does not or would not prove infringement. In certain instances, Defendant alleged that no products of a particular model were available. TQ Delta reserves the right to supplement these charts and/or provide additional testing information if such products become available.

These charts are directed to a limited number of representative Accused Products. The representative products that have been charted are intended to be representative of other of Defendant's products that contain same or similar DSL chips. According to an exchange between the Court and 2Wire's counsel during the May 5, 2015 hearing, one chart per chip is sufficient to show that all such products including that chip similarly meet the limitations, as follows:

For 2Wire there are seven different DSL chips. Five from Broadcom and two from a company called Ikonos. I suspect Mr. Day may have slightly more, because as he described earlier, they have at AT&T side of the products also in the case, but for 2Wire it would be seven charts, one per distinct DSL chip.

May 5, 2015 Hearing Tr. at 59:4-9.

Exhibit A to this document sets forth a cross-reference of the Broadcom chips in the Accused Products to versions of firmware code produced by Broadcom. Additionally, the table below provides a list of Source Code Appendices that are attached here and referenced in TQ Delta's Final Infringement Contention for Products that Contain Broadcom Chips.

No.	Family	Patent No.	Claim(s)	Code Base (version or chip no.)	App. Description
1.1	1A	7,889,784	1	BCM6090	1.1 - 784 Patent - Claim 1 - BCM6090 Code Base
1.2	1A	7,889,784	1	BCM6091	1.2 - 784 Patent - Claim 1 - BCM6091 Code Base
1.3	1A	7,889,784	1	BCM63x68 and BCM6332	1.3 - 784 Patent - Claim 1 - BCM63x68 and BCM6332 Code Base
2.1	2	7,453,881	17, 18	BCM6091	2.1 - 881 Patent - Claims 17, 18 - BCM6091 Code Base
2.2	2	7,453,881	17, 18	BCM63x68	2.2 - 881 Patent - Claims 17, 18 - BCM63x68 Code Base
3.1	3	8,276,048	1	BCM6091	3.1 - 048 Patent - Claim 1 - BCM6091 Code Base
3.2	3	8,276,048	1	BCM63x68	3.2 - 048 Patent - Claim 1 - BCM63x68 Code Base
3.5	3	8,495,473	19	BCM6091	3.5 - 473 Patent - Claim 19 - BCM6091 Code Base
3.6	3	8,495,473	19	BCM63x68	3.6 - 473 Patent - Claim 19 - BCM63x68 Code Base
3.9	3	7,844,882	13	BCM63x68	3.9 - 882 Patent - Claim 13 - BCM63x68 Code Base
3.12	3	7,836,381	5	BCM63x68	3.12 - 381 Patent - Claim 5 - BCM63x68 Code Base
4.1	4	7,292,627	26	BCM6091	4.1 - 627 Patent - Claim 26 - BCM6091 Code Base
4.2	4	7,292,627	26	BCM63x68	4.2 - 627 Patent - Claim 26 - BCM63x68 Code Base
4.5	4	8,073,041	14	BCM6091	4.5 - 041 Patent - Claim 14 - BCM6091 Code Base
4.6	4	8,073,041	14	BCM63x68	4.6 - 041 Patent - Claim 14 - BCM63x68 Code Base
4.9	4	8,090,008	14	BCM6091	4.9 - 008 Patent - Claim 14 - BCM6091 Code Base
4.10	4	8,090,008	14	BCM63x68	4.10 - 008 Patent - Claim 14 - BCM63x68 Code Base
5.1	5	7,451,379	11, 16	BCM63x68 and BCM6332 (ADSL2-2+)	5.1 - 379 Patent - Claims 11, 16 - BCM63x68 and BCM6332 ADSL2-2+ Code Base
5.2	5	7,451,379	11, 16	BCM63x68 (VDSL2)	5.2 - 379 Patent - Claims 11, 16 - BCM63x68 VDSL2 Code Base
5.3	5	7,451,379	11, 16	BCM6091	5.3 - 379 Patent - Claims 11, 16 -

				(VDSL2)	BCM6091 VDSL2 Code Base
5.8	5	8,516,337	10, 16	BCM63x68 and BCM6332 (ADSL2-2+)	5.8 - 337 Patent - Claims 10, 16 - BCM63x68 and BCM6332 ADSL2-2+ Code Base
5.9	5	8,516,337	10, 16	BCM63x68 (VDSL2)	5.9 - 337 Patent - Claims 10, 16 - BCM63x68 VDSL2 Code Base
5.10	5	8,516,337	10, 16	BCM6091 (VDSL2)	5.10 - 337 Patent - Claims 10, 16 - BCM6091 VDSL2 Code Base
6.1	6	8,462,835	8, 10	BCM63x68	6.1 - 835 Patent - Claims 8, 10 - BCM63x68 Code Base

The table below identifies 2Wire **Representative** Accused Products and 2Wire **Represented** Accused Products, which contain the same xDSL chip as the respective Representative Product based on the identification of xDSL chips identified in 2Wire's response and supplements thereto to TQ Delta's TQ Delta's Interrogatory No. 7; the table further provides an identification of the infringement charts which are applicable to the Representative and Represented Accused Products.:

Accused Representative Product	Accused Represented Product(s)	xDSL Chip	Infringement Chart. No.
2701HGV	2071 2700HG 2700HGV 2701 2701HG 2701HGV 2701HGV-E	BCM6090	1.2701HGV.1 1.2701HGV.2
5031NV	5031NV	BCM6368	1.5031NV.1 1.5031NV.2 1.5031NV.3 1.5031NV.4 3.5031NV.1 3.5031NV.2 3.5031NV.3 3.5031NV.4 4.5031NV.1 4.5031NV.2 4.5031NV.3

			5.5031NV.1 5.5031NV.2 5.5031NV.3 5.5031NV.4 6.5031NV.1
5168NV	5168N 5168NV 5268AC	BCM63168	1.5168NV.1 1.5168NV.2 1.5168NV.3 1.5168NV.4 3.5168NV.1 3.5168NV.2 3.5168NV.3 3.5168NV.4 4.5168NV.1 4.5168NV.2 4.5168NV.3 5.5168NV.1 5.5168NV.2 5.5168NV.3 5.5168NV.4 6.5168NV.1 2.5168NV.1
i3812V	i3812V 3801HGV	BCM6091	1.i3812V.1 1.i3812V.2 2.i3812V.1 3.i3812V.1 3.i3812V.2 3.i3812V.3 3.i3812V.4 4.i3812V.1 4.i3812V.2 4.i3812V.3 5.i3812V.1 5.i3812V.2
4111N	4111N	BCM6328	1.4111N.1 1.4111N.2 5.4111N.1 5.4111N.2

G.vector (ITU-T G.993.5) incorporates by reference certain sections of the VDSL2 standard. Therefore, it should be understood that infringement is found in products operating in

accordance with G.vector and that such infringement may be shown by reference to the cited sections of the VDSL2 standard.

In addition to the attached charts that provide evidence of direct infringement, Plaintiff also contends that Defendant infringes the patents-in-suit indirectly. In particular, as pled, Defendant actively induces infringement of the patents-in-suit in the United States. Defendant knew that its products infringed the patents-in-suit, yet encouraged its customers to infringe.

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/s/ Paul W. McAndrews

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